Serial No.
 10/710,412
 Examiner:
 Adam Henderson

 Filed:
 July 8, 2004
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- (Cancelled)
- 2. (Cancelled)
- (Currently Amended) The imaging system according to claim-2 61, wherein the output is a gain determined by an Automatic Gain Control.
- (Currently Amended) The imaging system according to claim-261, wherein the output is a value representative of a gain determined by an Automatic Gain Control.
- (Currently Amended) The imaging system according to claim-261, wherein the output is an exposure.
- (Currently Amended) The imaging system according to claim-261, wherein the output is a white balance.
- 7. (Currently Amended) The imaging system according to claim-2.63, wherein, when the output is less than a first threshold, the infrared filter is in the first position, and when the output is greater than a second threshold, the infrared filter is in the second position.
- (Canceled)
- (Currently Amended) The imaging system according to claim <u>861</u>, wherein the second threshold is twice the first threshold.
- 10. (Currently Amended) The imaging system according to claim+61, wherein the infrared filter automatically moves between the first position and the second position as a result of lighting conditions in a-the_viewing area of the camera.

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11. (Original) The imaging system according to claim 10 and further comprising a solenoid that moves the infrared filter between the first position and the second position.

- (Currently Amended) The imaging system according to claim+61, wherein the infrared filter is manually moved between the first position and the second position.
- (Currently Amended) The imaging system according to claim + 61, wherein the camera further comprises an infrared filter holder for mounting the infrared filter to the camera.
- 14. (Original) The imaging system according to claim 13, wherein the infrared filter holder pivots relative to the image sensor to move the infrared filter between the first position and the second position.
- 15. (Currently Amended) The imaging system according to claim-1.61, wherein the image sensor comprises a focal length, and the infrared filter has a thickness that does not substantially change the focal length of the image sensor as the infrared filter moves between the first position and the second position.
- 16. (Currently Amended) The imaging system according to claim-1.61 and further comprising a supplemental illumination system comprising at least one light source for providing supplemental illumination to a-the viewing area of the camera.
- (Currently Amended) The imaging system according to claim 1416, wherein the at least one light source comprises a light emitting diode.
- (Currently Amended) The imaging system according to claim-15_17, wherein the light emitting diode is an infrared light emitting diode.
- (Currently Amended) The imaging system according to claim-15_17, wherein the light emitting diode is a white light emitting diode.
- (Currently Amended) The imaging system according to claim-15 17, wherein the light emitting diode is a colored light emitting diode.

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 (Original) The imaging system according to claim 16, wherein the vehicle comprises a license plate lightbar, and the supplemental illumination system is mounted to the lightbar.

- (Original) The imaging system according to claim 16, wherein the vehicle comprises a
 center high mount stop lamp, and the supplemental illumination system is mounted to the center
 high mount stop lamp.
- (Original) The imaging system according to claim 16, wherein the vehicle comprises at least one tail lamp, and the supplemental illumination system is mounted to the at least one tail lamp.
- 24. (Original) The imaging system according to claim 16, wherein the camera and the supplemental illumination system form a unitary module.
- (Original) The imaging system according to claim 16, wherein the at least one light source is directed rearwardly of the vehicle.
- (Original) The imaging system according to claim 16, wherein the supplemental illumination system is selectively actuable when the imaging system is activated.
- 27. (Currently Amended) The imaging system according to claim 16, wherein the supplemental illumination system is selectively actuable when the infrared filter is automatically positioned in one of the first position and the second position in accordance with lighting conditions in a viewing area of the camera.
- 28. (Currently Amended) The imaging system according to claim <u>4.61</u>, wherein the image sensor is a complimentary metal oxide semiconductor.
- 29. (Currently Amended) The imaging system according to claim+61, wherein the infrared radiation comprises wavelengths between about 700 nm and 1 mm.
- 30. (Currently Amended) The imaging system according to claim—1 61, wherein the infrared radiation comprises near-infrared radiation.

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31.-50. (Cancelled)

51. (Currently Amended) The imaging system according to claim-47.65, wherein the infrared filter is movable from a first position, wherein the infrared filter is disposed in the optical path of the image sensor for preventing transmission of the infrared radiation to the image sensor, and a second position, wherein the infrared filter is spaced from the optical path of the image sensor

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52. (Currently Amended) The imaging system according to claim 51, wherein the infrared filter moves as a result of an output of the camera, wherein the output is indicative of light conditions in a viewing area of the camera.

and does not prevent transmission of the infrared radiation to the image sensor.

- 53. (Original) The imaging system according to claim 52, wherein the output is a gain determined by an Automatic Gain Control.
- 54. (Original) The imaging system according to claim 52, wherein the output is a value representative of a gain determined by an Automatic Gain Control.
- 55. (Original) The imaging system according to claim 52, wherein, when the output is less than a first threshold, the infrared filter is in the first position, and when the output is greater than a second threshold, the infrared filter is in the second position.
- 56. (Canceled)
- (Currently Amended) The imaging system according to claim-56_55, wherein the second threshold is twice the first threshold.
- 58. (Original) The imaging system according to claim 51 and further comprising a supplemental illumination system comprising at least one light source for providing supplemental illumination to the viewing area of the camera.
- 59. (Original) The imaging system according to claim 58, wherein the at least one light source comprises a light emitting diode.

 (Original) The imaging system according to claim 59, wherein the supplemental illumination system is selectively actuable when the imaging system is activated.

61. (New) An imaging system for use in an exterior or interior of a vehicle, the imaging system comprising:

a camera having an image sensor with an associated optical path, the image sensor adapted for generating an output that is indicative of lighting conditions in a viewing area of the camera; and

an infrared filter associated with the image sensor for attenuating infrared radiation;

wherein the infrared filter is movable as a result of the output of the image sensor, between a first position in which the infrared filter is disposed in the optical path of the image sensor for preventing transmission of the infrared radiation to the image sensor, and a second position in which the infrared filter is spaced from the optical path of the image sensor and does not prevent transmission of the infrared radiation to the image sensor; and

wherein, when the output is less than a first threshold, the infrared filter is in the first position, and when the output is greater than a second threshold which is greater than the first threshold, the infrared filter is in the second position.

62. (New) An imaging system for use in an exterior or interior of a vehicle, the imaging system comprising:

a camera having an image sensor with an associated optical path, and a viewing area; and

an infrared filter associated with the image sensor for selectively attenuating infrared radiation, and movable as a result of an output of the image sensor indicative of light conditions in the viewing area of the camera, between a first position, in which the infrared filter is disposed in the optical path of the image sensor for preventing transmission of the infrared radiation to the image sensor, and a second position, in which the infrared filter is spaced from the optical path of the image sensor and does not prevent transmission of the infrared radiation to the image

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sensor:

wherein the infrared filter is automatically responsive to light conditions in the viewing area such that the infrared filter prevents the image sensor from being exposed to infrared radiation when light conditions in the viewing area correspond to bright light conditions and does not prevent the image sensor from being exposed to infrared radiation when the light conditions in the viewing area correspond to low light conditions; and

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wherein, when the output is less than a first threshold, the infrared filter is in the first position, and when the output is greater than a second threshold which is greater than the first threshold, the infrared filter is in the second position.

63. (New) An imaging system for use in an exterior or interior of a vehicle, the imaging system comprising:

a camera having an image sensor with an associated optical path, the image sensor providing an image sensor output that is indicative of lighting conditions in the vicinity of the camera: and

an infrared filter associated with the image sensor for attenuating infrared radiation;

wherein, in response to the output from the image sensor, the infrared filter is movable from a first position, wherein the infrared filter is disposed in the optical path of the image sensor for preventing transmission of the infrared radiation to the image sensor, and a second position, wherein the infrared filter is spaced from the optical path of the image sensor and does not prevent transmission of the infrared radiation to the image sensor.

- 64. (New) The imaging system according to claim 63, wherein an indication of lighting conditions in the vicinity of the camera comprises a gain applied to pixels of an image captured by the image sensor.
- 65. (New) An imaging system for use in an exterior or interior of a vehicle, the imaging system comprising:

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a camera having an image sensor with an associated optical path and viewing area, the image sensor providing an image sensor output that is indicative of lighting conditions in the viewing area; and

an infrared filter associated with the image sensor for selectively attenuating infrared radiation;

wherein the infrared filter is responsive to the image sensor output such that the infrared filter prevents the image sensor from being exposed to infrared radiation when lighting conditions in the viewing area correspond to bright light conditions, and does not prevent the image sensor from being exposed to infrared radiation when the lighting conditions in the viewing area correspond to low light conditions.